

इंटरनेट

मानक

### Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 10738-5-2 (1992): Flanges for Waveguides, Part 5:  
Flanges for Medium Flat Rectangular Waveguides, Section 2:  
Flange Type L [LITD 6: Wires, Cables, Waveguides and  
Accessories]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE



भारतीय मानक

तरंग पथकों के फ्लेंज — विशिष्ट

भाग 5 मध्यम सपाट आयताकार तरंग पथकों के फ्लेंज

अनुभाग 2 फ्लेंज टाइप एल

*Indian Standard*

## FLANGES FOR WAVEGUIDES — SPECIFICATION

PART 5 FLANGES FOR MEDIUM FLAT RECTANGULAR WAVEGUIDES

Section 2 Flange Type L

UDC 621.372.831.621.372.822

© BIS 1992

**BUREAU OF INDIAN STANDARDS**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

May 1992

Price Group 3

## FOREWORD

This Indian Standard ( Part 5/Sec 2 ) was adopted by the Bureau of Indian Standards, after the draft finalized by the Microwave Components and Accessories Sectional Committee had been approved by the Electronics and Telecommunication Division Council.

This standard shall be read in conjunction with IS 10738 ( Part 1 ) : 1983 'Flanges for waveguides : Part 1 General requirements and tests' and IS 10738 ( Part 5/Sec 1 ) 'Flanges for waveguides : Part 5 Flanges for medium flat rectangular waveguides, Section 1 General'.

Different types of waveguide flanges are being covered in a series of standards consisting of the following individual parts of this standard:

- Part 1 General requirements and tests
- Part 2 Flanges for ordinary rectangular waveguides
- Part 3 Flanges for flat rectangular waveguides
- Part 4 Flanges for circular waveguides
- Part 5 Flanges for medium flat rectangular waveguides
- Part 6 Flanges for square waveguides

This Part 5 is being issued in 3 Sections as follows:

- Sec 1 General
- Sec 2 Flange Type L
- Sec 3 Flange Type N

While preparing this standard assistance has been derived from IEC Pub 154-6 ( 1983 ) 'Flanges for waveguides: Part 6 Relevant specification for flanges for medium flat rectangular waveguides' issued by the International Electrotechnical Commission ( IEC ).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values ( *revised* )'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*

# FLANGES FOR WAVEGUIDES — SPECIFICATION

## PART 5 FLANGES FOR MEDIUM FLAT RECTANGULAR WAVEGUIDES

### Section 2 Flange Type L

#### 1 SCOPE

This Indian Standard ( Part 5/Sec 2 ) lays down dimensional requirements for flange Type L for medium flat rectangular waveguides.

#### 2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>
4493 ( Part 3 ) : 1982	Hollow metallic waveguides : Part 3 Medium flat rigid rectangular waveguides
10738 ( Part 1 ) : 1983	Flanges for waveguides : Part 1 General requirements and tests
10738 ( Part 5/Sec 1 ) : 1990	Flanges for waveguides : Part 5 Flanges for medium flat rectangular waveguides, Section 1 General

#### 3 CLIMATIC CATEGORY

Provisions of 3 of IS 10738 ( Part 1 ) : 1983 shall apply.

#### 4 MATERIALS CONSTRUCTION AND WORKMANSHIP

Provisions of 4 of IS 10738 ( Part 1 ) : 1983 shall apply.

#### 5 DESIGNATION OF FLANGES FOR WAVEGUIDES

Provisions of 5 of IS 10738 : ( Part 1 ) : 1983 shall apply.

#### 6 MARKING

Provisions of 6 of IS 10738 ( Part 1 ) : 1983 shall apply.

#### 7 PACKING

Provisions of 7 of IS 10738 ( Part 1 ) : 1983 shall apply.

#### 8 DIMENSIONAL REQUIREMENTS

The outline and dimensions for plain unpressurizeable Type L flanges shall be in accordance with Fig. 1 to 3 and Table 1.

#### 9 TESTS

Provisions of 9 of IS 10738 ( Part 5/Sec 1 ) : 1990 shall apply.

Table 1 Dimensions of Type L Flanges for Medium Flat Rectangular Waveguides

( Clause 8 )

Type Designation of Waveguide Flange 10738 IS :	To be Used with Waveguide	Fig.	Dimensions for Holes							1) a)	1) b)	2) $P_{min}$	
			Dia- meter $A_{Basic}$	Alignment Holes			Attachment Holes						
				Fit	Deviation		Fit	Deviation					
					Lower	Upper		Lower	Upper				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
ULM	12	M12	1	6'350	A9	+0'280	+0'316	A15	+0'280	+0'860	201'98	55'30	236'0
	14	M14	2	6'350	A9	+0'280	+0'316	A15	+0'280	+0'860	169'16	45'36	200'0
	18	M18	2	4'000	B9	+0'140	+0'170	B15	+0'140	+0'620	133'60	36'46	155'0
	22	M22	2	4'000	B9	+0'140	+0'170	B15	+0'140	+0'620	113'28	31'36	135'0
	26	M26	2	4'000	B9	+0'140	+0'170	B15	+0'140	+0'620	90'42	25'66	112'0
	32	M32	2	4'000	B9	+0'140	+0'170	B15	+0'140	+0'620	76'20	22'06	97'9
	40	M40	3	4'000	C9	+0'070	+0'100	C15	+0'070	+0'550	61'42	17'75	80'2
	48	M48	3	4'000	C9	+0'070	+0'100	C15	+0'070	+0'550	50'80	15'15	70'5
	58	M58	3	4'000	C9	+0'070	+0'100	C15	+0'070	+0'550	43'64	13'35	63'5
	70	M70	3	4'000	C9	+0'070	+0'100	C15	+0'070	+0'550	38'10	11'95	57'8
100	M100	3	4'000	C9	+0'070	+0'100	C15	+0'070	+0'550	25'40	7'54	44'9	

All dimensions in millimetres.

Table 1 ( Concluded )

<sup>2)</sup> $N_{\min}$	<sup>2)</sup> $X$	$R_{\max}$	$2B$	$2C$	$2D$	$2E$	$2F$	$\phi Z$ Positional Tolerance	Dimensions for Locating Holes			
									Shank Diame- ter	Fit	Deviation	
											Lower	Upper
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
91·0	12·0	1·6	44·0	132·00	220·00	44·00	75·00	0·20	6·350	h8	-0·022	0
76·0	9·0	1·0		100·00	185·00	36·00	61·00	0·20	6·350	h8	-0·022	0
60·0	9·0	1·0		73·00	146·00	29·00	51·00	0·10	4·000	h8	-0·018	0
55·0	9·0	1·0		63·00	126·00	25·00	46·00	0·10	4·000	h8	-0·018	0
49·0	9·0	1·0		52·00	103·00	21·00	40·00	0·10	4·000	h8	-0·018	0
45·0	9·0	1·0		45·00	98·64	17·02	36·00	0·10	4·000	h8	-0·018	0
42·0	6·4	0·8		28·00	72·24	20·62	34·00	0·05	4·000	h8	-0·018	0
40·0	6·4	0·8		20·58	61·72	23·78	30·00	0·05	4·000	h8	-0·018	0
38·0	6·4	0·8		18·38	53·90	24·34	28·00	0·05	4·000	h8	-0·018	0
32·0	6·4	0·8		16·36	49·02	17·42	24·00	0·05	4·000	h8	-0·018	0
28·0	6·4	0·65		11·94	35·82	11·42	20·00	0·05	4·000	h8	-0·018	0

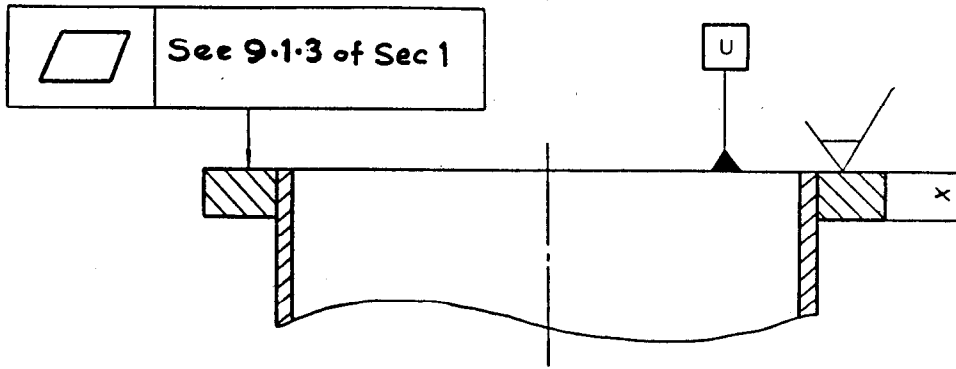
All dimensions in millimetres.

1) These values are basic values of the outside cross-section of the waveguide according to IS 4493. They should be regarded as basic values for the aperture according to 8.3.16 of IS 10738 ( Part 1 ) : 1983, that apply to unmounted flanges only.

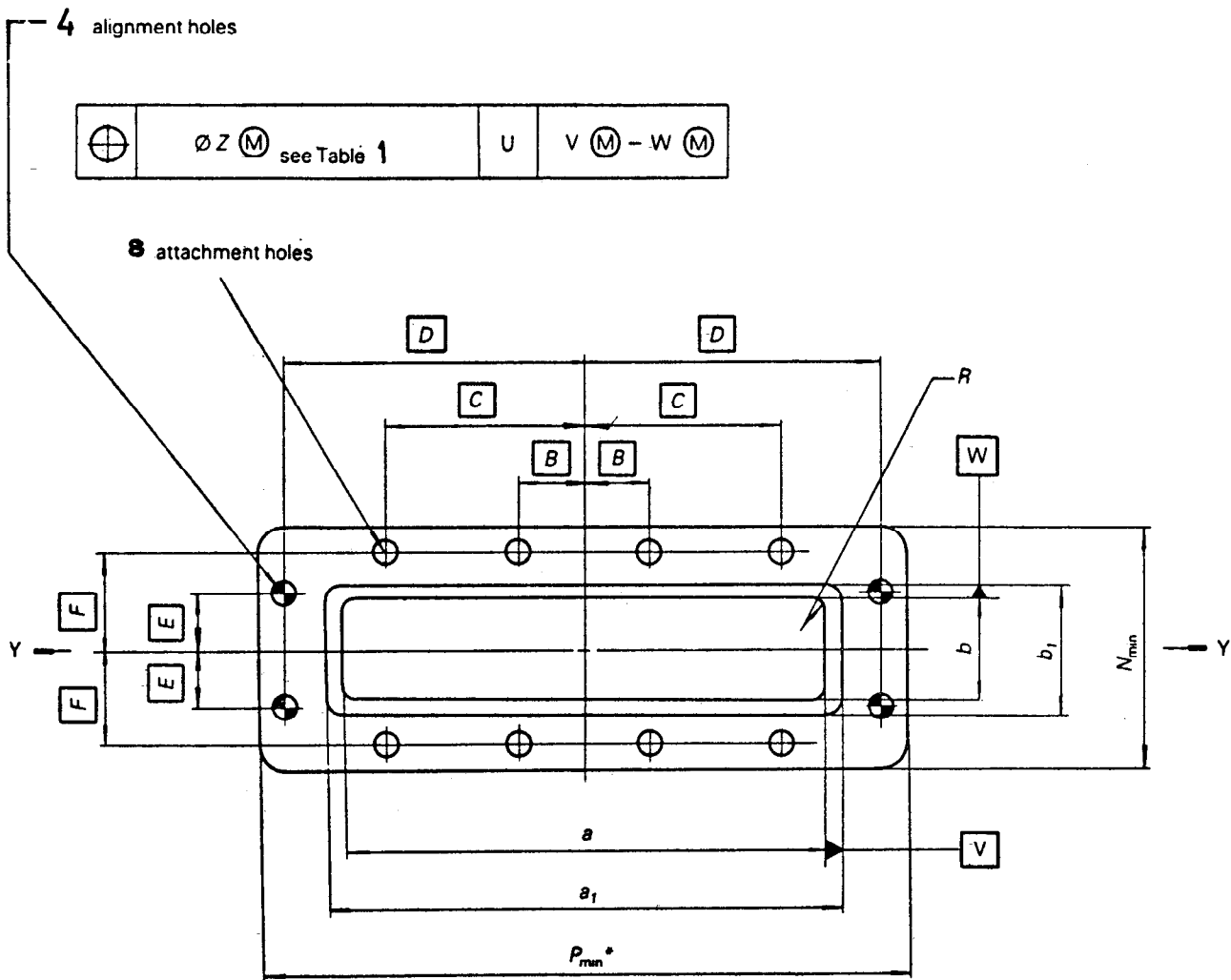
For through type type flanges, the actual aperture limits depend on the assembling method and should therefore be agreed upon between customer and manufacturer.

2) These dimensions are not essential for the mating of two assemblies.





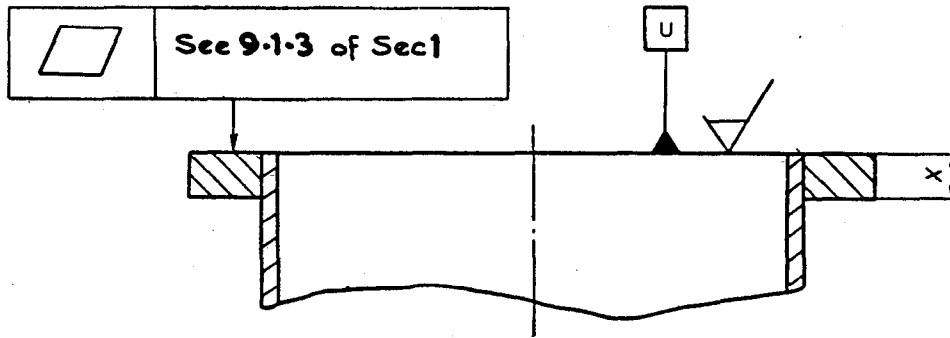
Cross-section Y-Y



\* These dimensions are not essential for the mating of two assemblies.

Front view

FIG. 1 FLANGE TYPE L 10738 IS — ULM 12  
( FIRST ANGLE PROJECTION )



Cross-section Y-Y

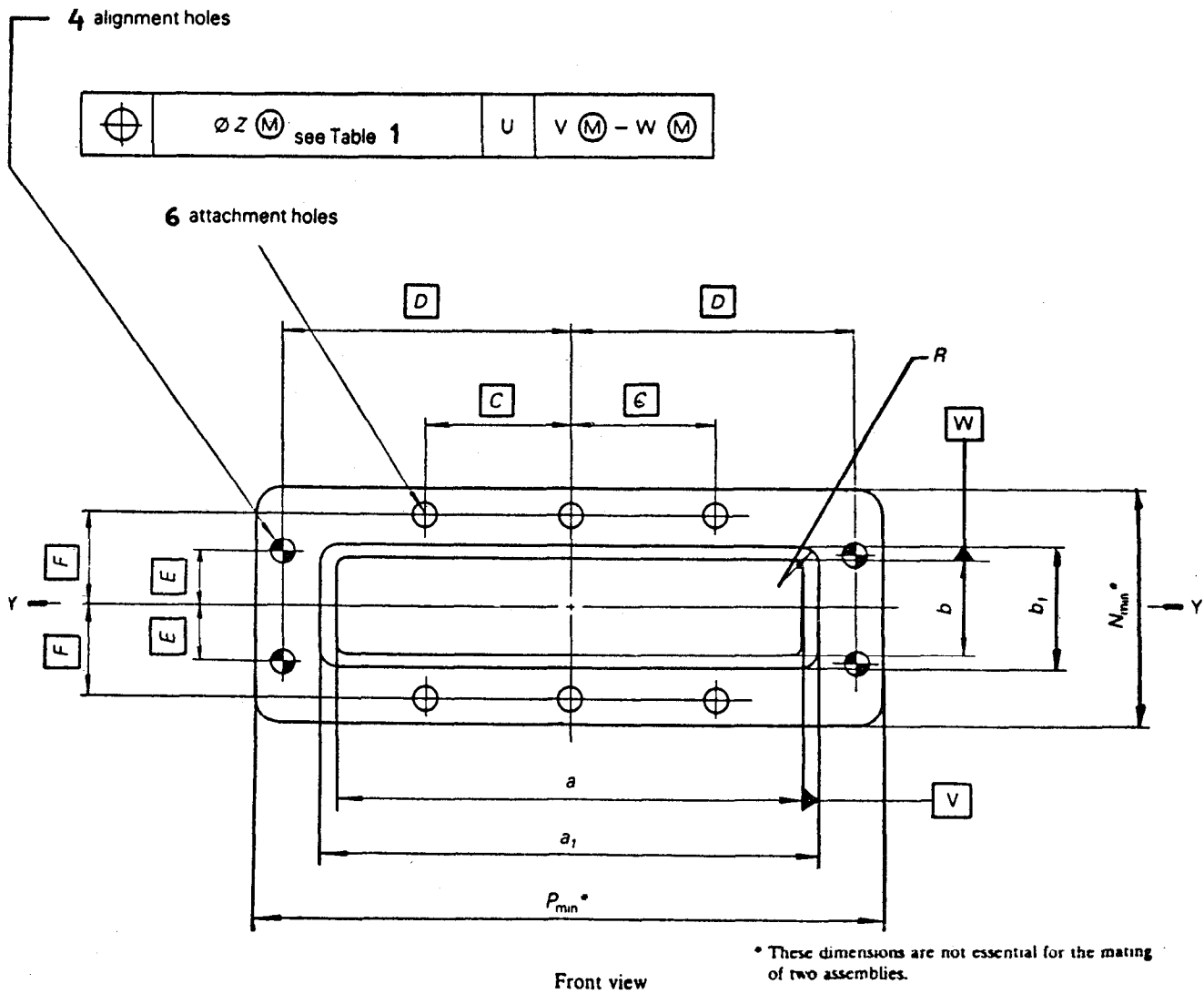
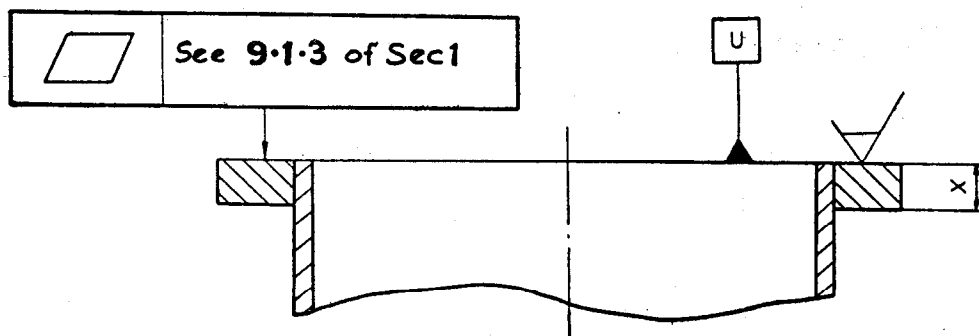
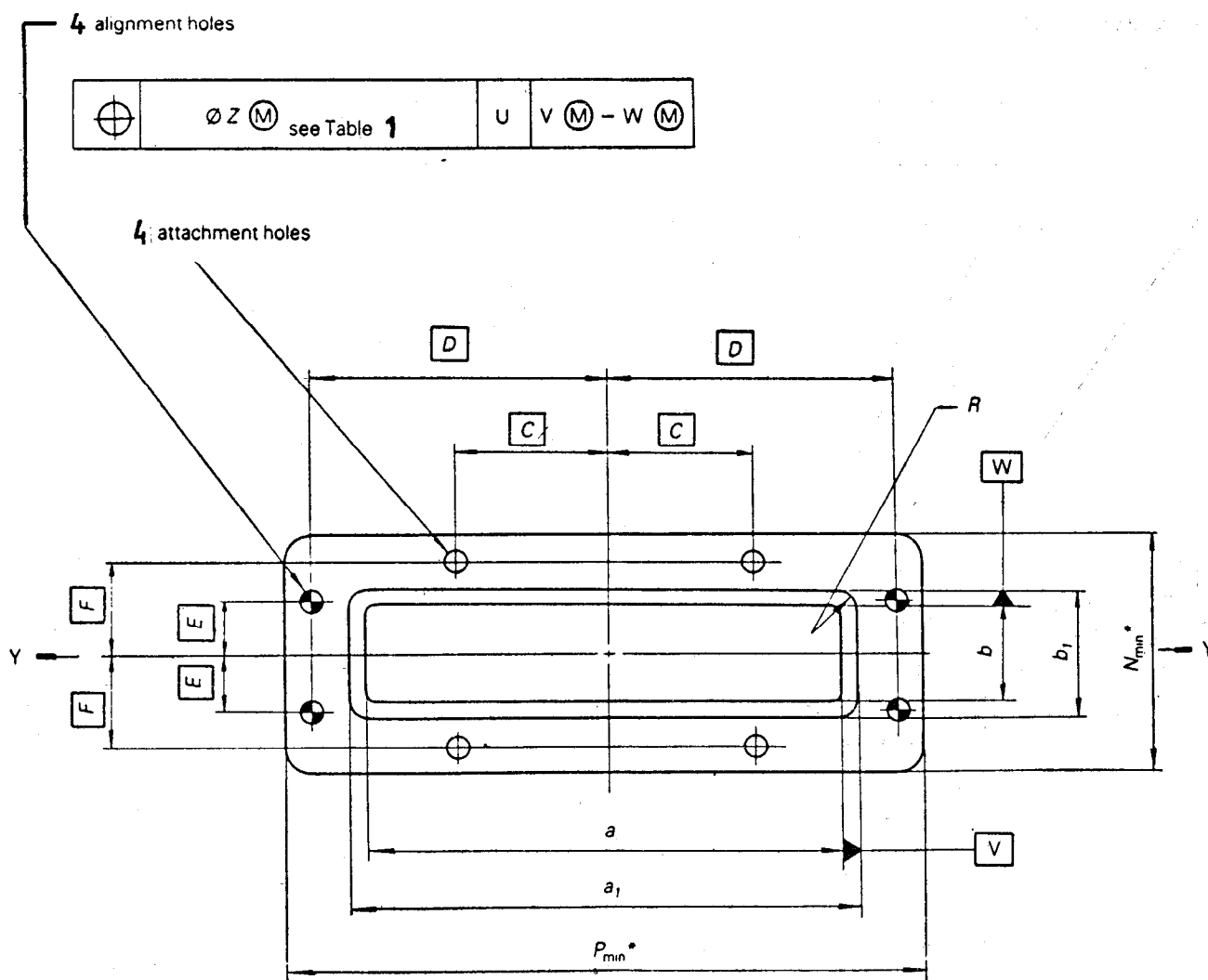


FIG. 2 FLANGE TYPE L 10738 IS — ULM 14 32  
( FIRST ANGLE PROJECTION )



Cross-section Y-Y



\* These dimensions are not essential for the mating of two assemblies.

Front view

FIG. 3 FLANGE TYPE L 10738 IS — ULM 401-00  
( FIRST ANGLE PROJECTION )

### **Standard Mark**

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## Bureau of Indian Standard

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

### Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designation. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

### Revision of Indian Standards

Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition. Comments on this Indian Standard may be sent to BIS giving the following reference:

Doc : No LTD 19 ( 1140 )

### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

## BUREAU OF INDIAN STANDARDS

### Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002  
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha  
( Common to all Offices )

### Regional Offices :

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg  
NEW DELHI 110002

### Telephone

{ 331 01 31  
{ 331 13 75

Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola  
CALCUTTA 700054

{ 37 84 99, 37 85 61,  
{ 37 86 26, 37 85 62

Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036

{ 53 38 43, 53 16 40,  
{ 53 23 84

Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113

{ 41 24 42, 41 25 19,  
{ 41 23 15, 41 29 16,

Western : Manakalaya, E9 MIDC, Marol, Andheri ( East )  
BOMBAY 400093

{ 632 92 95, 63 27 80,  
{ 632 78 92

Branches : AHMADABAD, BANGALORE, BHOPAL, BHUBANESHWAR, COIMBATORE  
FARIDABAD, GHAZIABAD, GUWAHATI, HYDERABAD, JAIPUR, KANPUR,  
LUCKNOW, PATNA, THIRUVANANTHAPURAM.